

REMARKS

Claims 16 and 17 have been cancelled. Claims 14, 15 and 18-33 are presently in the application. The above amendments are being made to place the application in better condition for examination.

Claims 21-27 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. According to the examiner's suggestions the claims have been amended to more clearly define the invention.

Reconsideration of the rejection of claims 14-17 under 35 U.S.C. 103(a) as being unpatentable over Yalcin, EP 0 978 649, in view of Lambert et al, USPN 6,338,445 is respectfully requested.

Claim 14 is directed to a fuel injector for an internal combustion engine, comprising an injector body (2), which has at least one first injection orifice (3) and at least one second injection orifice (4),

a first nozzle needle (7) that is embodied as a hollow needle *and is guided in a first needle guide (6) of the injector body (2)*,

a second nozzle needle (9) disposed coaxial to the first nozzle needle (7) and guided in a second needle guide (8) within the first nozzle needle,

the first nozzle needle (7) being driven to control the injection of fuel through the at least one first injection orifice (3) and the second nozzle needle (9) being driven to control the

injection of fuel through the at least one second injection orifice (4),

a first catch contour (19) embodied on the first nozzle needle (7),

a second catch contour (20) embodied on the second nozzle needle (9), whereby once the first nozzle needle (7) opens a predetermined preliminary stroke (24), the first catch contour (19) cooperates with the second catch contour (20) and when an opening movement of the first nozzle needle (7) exceeds the preliminary stroke (24), carries the second nozzle needle (9) along with it, and

a sealing seat (16) of the second nozzle needle disposed between the at least one first injection orifice (3) and the at least one second injection orifice (4), wherein a cross-sectional area of the sealing seat (16) is the same size as a cross-sectional area of the second needle guide.

Yalcin shows a fuel injector having an injector body (12) with at least one first injection orifice (14) and at least one second injection orifice (16), a first nozzle needle (20) embodied as a hollow needle, a second nozzle needle (30) disposed coaxial to the first nozzle needle, a first catch contour (39) embodied on the first nozzle needle, and a second catch contour (38) embodied on the second nozzle needle, and a first leakage chamber (75). However, Yalcin does not expressly show the first nozzle needle being guided in a first needle guide of the injector body, as Yalcin lacks a first needle guide.

Lambert is relied upon for providing a needle guide for an injector body such that an outer nozzle needle (12) of a pair of coaxially arranged nozzle needles (12 and 18) may be guided within the injector body.

Claim 14 has been amended to recite a more specific limitation regarding the cross-sectional area of the sealing seat, particularly that the cross-sectional area of the second sealing seat is the same as the cross-sectional area of the second needle guide. Since Yalcin clearly lacks the first needle guide and the new requirements of the second sealing seat having the same cross sectional area of the second needle guide, reconsideration of the above rejection is respectfully requested.

Reconsideration of the rejection of claims 14 and 16 under 35 U.S.C. 103(a) as being unpatentable over Arndt et al., US Patent Application No. 2003/0052203, in view of Lambert et al., USPN 6,338,445 is respectfully requested.

Arndt shows an injector body (31) having at least one first injection orifice (44, 45) and at least one second injection orifice (46, 47), a first nozzle needle assembly (34, 35) embodied as a hollow needle, a second nozzle needle (38) disposed coaxial to the first nozzle needle, a first catch contour (43) embodied on the first nozzle needle, and a second catch contour (42) embodied on the second nozzle needle. However, Arndt does not show the first nozzle needle being guided in a first needle guide of the injector body, as it appears a first needle guide is lacking.

Lambert teaches providing a needle guide for an injector body (10) such that an outer nozzle needle (12) of a pair of coaxially arranged nozzle needles (12 and 18) may be guided within the injector body.

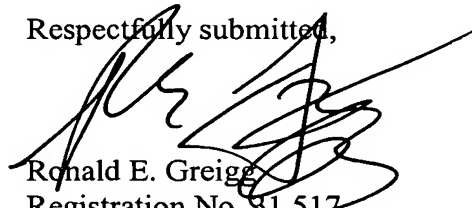
Appl. No. 10/538,031
Amdt. dated January 24, 2007
Reply to Office action of October 24, 2006

As noted above, claim 14 has been amended to recite a more specific limitation regarding the cross-sectional area of the sealing seat, particularly that the cross-sectional area of the second sealing seat is the same as the cross-sectional area of the second needle guide. Since Arndt et al clearly lacks the first needle guide and the new requirements of the second sealing seat having the same cross sectional area of the second needle guide, reconsideration of the above rejection is respectfully requested.

Claims 18-20 and 28-33 have been indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 18, 21, and 28 have been written in independent form and allowance of claims 18-20 and 28-33 thereof is respectfully requested.

Entry of the amendment is respectfully solicited.

Respectfully submitted,



Ronald E. Greigg
Registration No. 31,517
Attorney for Applicant

CUSTOMER NO. 02119

GREIGG & GREIGG. P.L.L.C.
1423 Powhatan Street, Suite One
Alexandria, VA 22314
Telephone: (703) 838-5500
Facsimile: (703) 838-5554

REG/JAK/hhl

J:\Bosch\R304748\Reply to 10-24-06 OA.wpd